REMARKS

Claims 1-3 are pending.

Claim 1 has been amended by changing the phrase "calculation value" to "calculated value," which is consistent with the phrase used earlier in the claim.

Attached is a marked-up version of the changes being made by the current amendment.

In the Office action, claim 3 was objected to as allegedly being a substantial duplicate of claim 2. That is incorrect. Claim 2 is a method claim which requires that various acts be performed. Claim 3 has been amended to clarify that it is directed to an article that includes a storage medium storing a program to cause a computer to perform certain acts. The circumstances under which each of those claims may be infringed is not identical and, therefore, it is clear that they cover different, albeit related, subject matter. Applicant respectfully requests withdrawal of the objection.

The office action rejected claim 1 under 35 U.S.C. 112, par. 2 as allegedly indefinite because of the phrase "adapted to." The Office action states:

> It has been held that the recitation that an element is "adapted to" perform a function us not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchinson, 69 USPQ 138.

That is an inaccurate statement of the law, at least as applied to claim 1. First, application notes that the decision cited by the Office action, *In re Hutchinson*, was decided in 1946, prior to passage of the present Patent Act in 1952. More importantly, in the claim at issue in that case, the phrase "adapted for" appeared in the claim's preamble, not as a limitation in the body of the claim:

> *42. An article of manufacture, adapted for use in the fabrication of a metal template or the like suitable for metal-working operations, a laminated unit comprising . . .*

In re Hutchinson, 69 USPQ 138, 140 (CCPA 1946). Indeed, more recent decisions by the Court of Appeals for the Federal Circuit suggest that use of the phrase "adapted to" in the body of a claim may serve as a substantive limitation. *See, e.g., Ishida Co. v. Taylor*, 55 USPQ2d 1449, 1453 (Fed. Cir.2000) (interpreting the phrase "a pair of sealing and stripping means . . . being adapted to cooperate . . ."); *Intermatic Inc. v. Lamson & Sessions Co.*, 61 USPQ2d 1075, 1983 (Fed. Cir. 2001). Therefore, applicant respectfully requests reconsideration and withdrawal of the rejection under section 112, par. 2.

The Office action states that claims 1-3 are rejected as anticipated by U.S. Patent No. 6,229,832 (Broutin et al.). During a teleconference with the Examiner on November 5, 2002, the Examiner confirmed that the intended patent number was 6,400,737 (Broutin et al.). This response proceeds on that basis.

Applicant submits that the conclusion that the claims are anticipated by the U.S. Patent No. 6,400,373 is incorrect. That patent discloses a control system with a temperature tuned, wavelength stabilized laser module. The output of the laser can be modified by adjusting the temperature through thermo-electric cooler (TEC) 124. A thermistor 126 monitors the temperature of the laser and provides the measured temperature to the controller 160. A look-up table stores the correlation between the wavelengths and temperatures.

The method of operation of the controller 160 is described beginning at col. 7, line 31. The controller calculates various values including (1) a normalized difference value according to equation 7 (col. 7, lines 52-63) , (2) a TEC control signal according to equation 6 (col. 8, lines 2-4 and col. 7, lines 1-4), (3) the etalon slope according to equation 2 (col. 8, lines 10-14 and col. 6, line 20) and (4) a numeric gain according to equation 5 (col. 8, lines 38-40 and col. 6, line 60).

To anticipate claimed subject matter, a single reference must disclose *each and every limitation* of the claim. Although U.S. Patent No. 6,400,737 discloses a thermistor 126 to monitor the temperature of the laser and a controller 160, there is no disclosure of "calculating an approximate temperature . . . *based on the set values of the wavelength and output level*" or "calculating an output level variation . . . based on the approximate temperature" as recited in claim 2. Nor is there any suggestion of those limitations or the subject matter of claim 2 as a whole.

For similar reasons, there is no disclosure or suggestion in U.S. Patent No. 6,400,737 of the "approximate temperature calculating section" or the "output level variation calculating section" recited in claim 1. Nor is there any disclosure or suggestion in that patent to "calculate an approximate temperature . . . based on the set values of the wavelength and output level" or "calculate an output level variation . . . based on the approximate temperature" as recited in claim 3.

In view of the foregoing remarks, applicant respectfully requests reconsideration and withdrawal of the rejections of the claims as unpatentable over the prior art.

Information Disclosure Statement

Applicant requests that the Examiner acknowledge consideration of the information disclosure statement filed on August 21, 2002 by returning a copy of the form PTO-1449 initialed by the examiner.

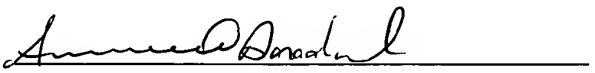
Conclusion

Applicant asks that all claims be allowed.

Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 12/23/02



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Version with markings to show changes made

In the claims:

Claims 1 and 3 have been amended as follows:

1. (Amended) A DFB laser driving device for driving a DFB laser to output optical signals having a predetermined wavelength and a predetermined output level, the DFB laser driving device comprising:

an input unit adapted to input set values of a wavelength and an output level;

an approximate temperature calculating section adapted to calculate an approximate temperature of the DFB laser based on the set values of the wavelength and output level;

an output level variation calculating section adapted to calculate an output level variation of the DFB laser based on the approximate temperature;

an output level controlling section adapted to calculate a calculated value based on the output level variation and the set value of the output level, so as to control the output level of the DFB laser based on the [calculation] calculated value; and

a temperature controlling unit adapted to calculate a set temperature of the DFB laser based on the calculated value and the set value of the wavelength so as to control the temperature of the DFB laser based on the set temperature of the DFB laser.

3. (Amended) [A] An article comprising a storage medium storing therein a program, which can be executed by a computer, for driving a DFB laser to output optical signals having a predetermined wavelength and a predetermined output level, the program for causing the computer to [comprising]:

input [ting] set values of a wavelength and a output level;

calculate [ing] an approximate temperature of the DFB laser based on the set values of the wavelength and output level;

calculate [ing] an output level variation of the DFB laser based on the approximate temperature;

calculate [ing] a calculated value based on the output level variation and the set value of the output level to obtain [an] a calculated value;

control [ling] the output level of the DFB laser based on the calculated value;

calculate [ing] a set temperature of the DFB laser based on the calculated value and the set value of the wavelength; and

control [ling] the temperature of the DFB laser based on the set temperature.